UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,082	10/10/2001	Katsuhiro Ishii	110671	4514

7590 04/30/2007	EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	09/937,082	ISHII, KATSUHIRO
	Examiner	Art Unit	
	Aashish Karkhanis	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 February 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-10,12-19 and 21-27* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-10,12-19 and 21-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>10 October 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action: ·

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.   Claims 1, 3 – 10, 12 – 19 and 21 – 27 are rejected under 35 U.S.C. 102(b) as

being anticipated by Ghosh et al. (U.S. Patent 4,498,079).

Regarding Claims 1, 5 – 8, 10, 12 – 17 and 23 – 26, Ghosh discloses a game

system performing image generation including a memory which stores a program and

data for image generating (col. 2, lins. 48 – 52), and at least one processor which is

connected to the memory and performs processing for image generating (col. 2, lins. 16

– 22) including a geometry processing section which performs perspective

transformation on an object being set in an object space specified in a three-

dimensional space (col. 15, lins. 58 – 68; col. 16, lins. 1 – 14; where a foreground

generator and a background generator provide a transformation of images using a real

world perspective method, where objects placed on a higher layer in the object space

obscure objects behind, using the edge geometry of an object on a higher layer), an

intermediate buffer drawing section which temporarily draws an image of a geometry

processed object in an intermediate buffer in place of drawing the image in a frame

buffer and a frame buffer drawing section which draws the image of the geometry

processed object drawn in the intermediate buffer from the intermediate buffer into the

frame buffer (col. 15, lins. 58 – 68; col. 16, lins. 1 – 14; where a foreground generator

and a background generator are each intermediate buffers and a

foreground/background selector means is a final frame buffer connected to a display

device), where into the frame buffer the frame buffer drawing section draws a primitive

surface of which drawing positions are specified based on three-dimensional

information associated with a position of the object in the object space (col. 18, lins. 37

– 48; where foreground/background primitives are drawn based on their three-

dimensional positioning either in front of or behind each other based within a layered

object space on an index value that determines the primitive layer's placement in

relation to other primitive layers) and on which the image of the geometry-processed

object drawn in the intermediate buffer is texture-mapped (col. 6, lins. 3 – 7; fig. 22B;

where texture information is added to an image within intermediate texture memory

through a background generator picture), an image effect section which performs a

given image effect processing on the image on the intermediate buffer before the image

drawn in the intermediate buffer is drawn in the frame buffer (col. 15, lins. 58 – 68; col.

16, lins. 1 – 14; where a foreground generator and a background generator are each

intermediate buffers and a foreground/background selector means is a final frame buffer

connected to a display device), an image synthesizing section which synthesizes an

image drawn in the intermediate buffer at a present frame with another image drawn in

the intermediate buffer at a past frame before the image drawn in the intermediate

buffer is drawn in the frame buffer, an image synthesizing section which synthesizes an

image drawn in the intermediate buffer with another image drawn in the frame buffer

before the image drawn in the intermediate buffer is drawn in the frame buffer (col. 15,

lins. 58 – 68; col. 16, lins. 1 – 14; where a foreground generator provides a changing

foreground image and a background generator provides a substantially static image

which repeats past frames in a current frame), and wherein the intermediate buffer

drawing section draws the image of the geometry processed object in the intermediate

buffer for each two-frame or each M-frame (M greater than or equal to 3) (col. 5, lins. 10

– 15; where double buffering allows two images to be synthesized in a frame buffer at

the same time for output to a video device at different times).

Regarding Claims 3, 19 and 21 – 22, Ghosh discloses a game system wherein

when a plurality of primitive surfaces corresponding to a plurality of objects are to be

drawn into the game buffer, the frame buffer drawing section performs hidden-surface

removal between the primitive surfaces based on the depth values of the respective

primitive surfaces and wherein the frame buffer drawing section draws a plurality of

primitive surfaces of which drawing positions are specified based on the three-

dimensional information of one object into the frame buffer (col. 18, lins. 37 – 48; where

foreground/background primitives are drawn based on their three-dimensional

positioning either in front of or behind each other, and where objects or portions of

objects hidden by another object are not drawn), and makes images texture-mapped

over the plurality of primitive surfaces different from one another (col. 6, lins. 3 – 7; fig.

22B; where texture information is added to an image within intermediate texture

memory through a background generator picture), and a geometry processing section

which performs perspective transformation on an object being set in an object space

specified in a three-dimensional space (col. 15, lins. 58 – 68; col. 16, lins. 1 – 14; where a foreground generator and a background generator provide a transformation of images using a real world perspective method, where objects placed on a higher layer in the object space obscure objects behind, using the edge geometry of an object on a higher layer).

Regarding Claims 9, 18 and 27, Ghosh discloses a game system wherein when the images of plural geometry-processed objects are drawn in the intermediate buffer, the intermediate buffer drawing section draws an image of a K-th object in the intermediate buffer at a N-th frame and draws an image of a L-th object in the intermediate buffer at a (N+1)-th frame without drawing the image of the K-th object in the intermediate buffer (col. 15, lins. 58 – 68; col. 16, lins. 1 – 14; where image data may be provided directly to a display processor for an unspecified frame which may be an (N+1)-th frame with a K-th object, when no foreground information is available and a background image is shown, or image data may be provided to a display processor for intermediate buffering for an unspecified frame which may be an N-th frame with an L-th object, when a static background image is shown over a changing foreground).

Response to Arguments

2.   Applicant's arguments have been fully considered but they are not persuasive.

Applicant maintains that the claimed invention distinguishes over the prior art because Ghosh does not disclose a three dimensional object in a object space. The examiner respectfully disagrees. Ghosh does disclose a three dimensional space, as described above, where a image is formed in a three dimensional space by laying

image objects, each composed of 2 dimensions, length and height, above and below

each other along a third dimension, depth, in order to form a final image object over

three dimensions.

Applicant also maintains that the claimed invention distinguishes over the prior

art because Ghosh does not disclose any geometry processing. The examiner

respectfully disagrees. Ghosh discloses the use of object geometry in forming three-

dimensional shapes, specifically by providing geometrized edges along image objects

defining transparent and opaque regions for use in a perspective image object. Texture

mapping is performed on objects as discussed above and shown in figs. 22A, 22B.

Therefore, for the reasons given above, claims 1, 3 – 10, 12 – 19 and 21 – 27

stand rejected.

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

U.S. Patent 4,398,189: Foreground/background buffers.

U.S. Patent 4,691,295: Video pixel combining buffers.

U.S. Patent 4,839,828: Video pixel combining buffers.

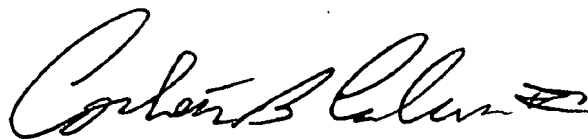U.S. Patent 4,951,229: Video pixel combining buffers.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Aashish Karkhanis whose telephone number is (571)

272-2774. The examiner can normally be reached on 0800-1630 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Robert Pezzuto can be reached on (571) 272-6996. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ARK

CORBETT B. COBURN
PRIMARY EXAMINER